

Appl. No.: 10/519,270
Reply to Office Action of: 09/21/2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for aligning at least one optic and/or electronic component on a substrate or a corresponding support structure, characterised in that the method comprises:

arranging an optic fibre hole in the support structure,
wherein a center axis of the optic fibre hole is aligned
generally perpendicular to the support structure;

arranging at least three stud bumps on the surface of the component; and

arranging said stud bumps at least partially in the optic fibre hole along the periphery of the hole for alignment of the component to the hole.

2. (Previously presented) A method according to claim 1, characterised in that aligning the component is performed by arranging the outer surfaces of the stud bumps against the hole walls.

3. (Previously presented) A method for aligning at least one optic fibre and an optoelectronic component to each other according to claim 1, wherein the component is mounted on a supporting structure and the optic fibre is connected to the

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optoelectronic component, characterised in that the method comprises:

threading the optic fibre through the hole, and

aligning the optic fibre and the component with each other by means of the stud bumps.

4. (Previously presented) A method according to claim 1; characterised in that aligning the fibre is performed by arranging the fibre against the inner surfaces of the stud bumps.

5. (Previously presented) A method according to claim 1, characterised in that the stud bumps have at least partly a conical and/or rounded surfaces, and that aligning the optic fibre with the component is performed by adapting the optic fibre along sloping conical inner surfaces and a horizontal brim in the stud bumps.

6. (Previously presented) A method according to claim 1, characterised in that the component is a surface emitting optoelectronic component, that the optic fibre is arranged perpendicular to the support structure, and that the fibre is connected to a radiating source on a metallized surface of the component facing the substrate.

7. (Previously presented) A method according to claim 1, characterised in that a conductive adhesive is used on the stud bump outer surfaces to accomplish an electrical connection to the support structure.

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8. (Previously presented) A method according to claim 1, characterised in that a direct bonding method is used to connect the stud bumps to the support structure.

9. (Previously presented) A method according to claim 1, characterised in that the stud bumps are of a solder material, and that a solder connection is used to connect the stud bumps to the support structure.

10. (Currently amended) An arrangement for aligning at least one optic and/or electronic component on a substrate or a corresponding support structure, characterised in that the arrangement comprises:

an optic fibre hole in the support structure, wherein a center axis of the optic fibre hole is aligned generally perpendicular to the support structure;

at least three stud bumps arranged on the surface of the component located at least partially in the optic fibre hole along a periphery of the hole, for aligning the component centered to the hole.

11. (Previously presented) A arrangement according to claim 10, characterised in that the stud bumps have at least partly a conical and/or rounded surfaces, and that an optic fibre is aligned with the component by adapting the optic fibre along sloping conical inner surfaces and against a horizontal brim in the stud bumps.

12. (Previously presented) An arrangement according to claim 10, characterised in that the component is a surface emitting optoelectronic component, that the optic fibre is arranged

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perpendicular to the substrate, and that the fibre is connected to a radiating source on a metallized surface of the component facing the substrate.

13. (Previously presented) An arrangement according to claim 10, characterised in that a conductive adhesive is used on the stud bump outer surfaces to accomplish an electrical connection to the substrate.

14. (Previously presented) An arrangement according to claim 10, characterised in that direct bonding is used to connect the stud bumps to the substrate.

15. (Previously presented) An arrangement according to claim 10, characterised in that the stud bumps are of a solder material, and that a solder connection is used to connect the stud bumps to the substrate.

16. (Previously presented) An arrangement according to claim 10, characterised in that the substrate consists of at least two layers, and that the diameter of the hole portion(s) in the layer(s) near the component is bigger having place for both the stud bumps and the optic fibre than in other opening portion(s) having a diameter essentially corresponding the diameter of the optic fibre.

17. (Currently amended) An arrangement for aligning at least one optic or electronic component on a support structure, the arrangement comprising at least three stud bumps arranged on a surface of the component, wherein the support structure comprises an optic fibre hole adapted to receive an end of an optic fibre, wherein a center axis of the optic fibre hole is

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aligned generally perpendicular to the support structure, wherein the stud bumps are located, at least partially, in the hole and contact walls of the hole to align the component relative to the hole.

18. (Previously presented) An arrangement as in claim 17 wherein the stud bumps have at least partly a conical and/or rounded surface, and that an optic fibre is aligned with the component by adapting the optic fibre along sloping conical inner surfaces and against a horizontal brim in the stud bumps.

19. (Previously presented) An arrangement according to claim 17 wherein the component is a surface emitting optoelectronic component, wherein the optic fibre is arranged perpendicular to the support structure, and wherein the optic fibre is connected to a radiating source on a metallized surface of the component facing the support structure.

20. (Previously presented) An arrangement according to claim 17 wherein a conductive adhesive is used on outer surfaces of the stud bumps to electrically connect the stud bumps to the support structure.